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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,295	07/14/2003	Michael Lee	NKTZ 2 00061	6308
27885	7590	01/25/2010	EXAMINER	
FAY SHARPE LLP 1228 Euclid Avenue, 5th Floor The Halle Building Cleveland, OH 44115			BLAU, STEPHEN LUTHER	
			ART UNIT	PAPER NUMBER
			3711	
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			01/25/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/619,295

Applicant(s)

LEE, MICHAEL

Examiner

Stephen L. Blau

Art Unit

3711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22, 23 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-23 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

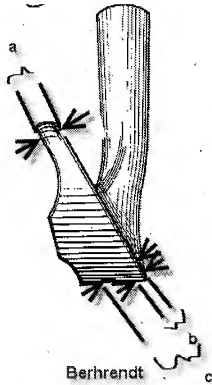
2. Claims 22-23, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elkins (4,128,242) in view of Behrendt (D164,469), Viollaz (5,447,311) and Motomiya (4,438,931).

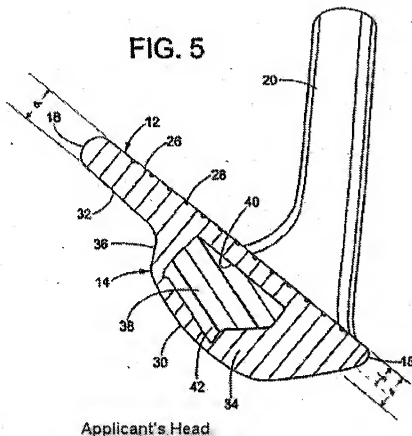
Elkins (4,128,242) discloses a head having a blade surface and a muscle back surface (Fig. 7), a blade surface being near a top edge and substantially parallel to the front face (Fig. 7), a muscle back portion covering at least half of the height of the rear surface as viewed from the toe end (Fig. 7), a cavity (53) disposed in a muscle back portion with a cavity (Figs. 7-8), a cavity vertically spaced from a sole (Fig. 7) and the cavity not visible from the exterior of a club in the form of being able to pour a filler into the cavity (53) and then placing a plug (55) over the cavity (Col. 12, Lns. 30-45) in order to have the moment of inertia about the center of gravity maximized by positioning weight at the heel and toe and in order to add effective loft to a head by having a center of gravity low (Col. 12, Lns. 19-67). Elkins (4,128,242) does not

disclose the back view of the head but does show the outline of the cavity inside the head (Fig. 8). Clearly one skilled in the art in designing the back would have selected a suitable design from toe to heel to support the outline cavity shown in figure 8 in which having a muscle back surface having an upper ledge that generally follows the contour of the top edge and a muscle back portion covering at least half of the surface area of the rear surface are included.

Elkins (4,128,242) lacks a muscle back surface having an upper ledge that generally follows the contour of the top edge, a muscle back portion covering at least half of the surface area of the rear surface, a thin sole and the distance between the front surface and the rear surface adjacent the sole is less than the distance between the front surface adjacent the top edge, a cavity disposed in a muscle back portion with the cavity not visible from the exterior of a club and having no visible cavity thereon, a substantial portion of the extra mass portion being positioned below the cavity, an elastomer at least substantially filling a cavity and an elastomer being a polyurethane.

Behrendt discloses an iron with a blade surface and a muscle back surface having a thin sole and the distance between the front surface and the rear surface adjacent the sole is less than the distance between the front surface adjacent the top edge as measured by the Applicant which is approximately perpendicular from the striking face surface (Fig. 2). See drawings in next sheets comparing the Applicant's measurements on the Applicant's inventive head (Page 6 of the Brief dated 20 February 2007) and the Examiner measuring the same way on the head of Behrendt.





In view of Behrendt it would have been obvious to modify the head of Elkins (4,128,242) to have a thin sole and the distance between the front surface and the rear surface adjacent the sole being less than the distance between the front surface adjacent the top edge in order to have a sharp leading edge of an iron which easily cuts through the ground when the swing requires a divot to be produced so the golfer feels less obstruction from the ground when producing a divot.

Elkins (4,128,242) has a lip at the back sole which one skilled in the art may define as forming a cavity on the back of the muscle back portion. Viollaz discloses a

cavity not visible from an exterior of a club, a cavity vertically spaced from the sole (Figs. 4-5), a thin sole (Fig. 4), a muscle back surface being rounded and having no visible cavity thereon (Figs. 2-3), a substantial portion of the extra mass portion being positioned below the cavity in the form of the bottom cavity wall being a substantial greater thickness than the top cavity wall (Fig. 4) and a cavity substantially filled with a foamed urethane in the form of polyurethane (Col. 2, Lns. 46-50). In view of the patent of Viollaz it would have been obvious to modify the head of Elkins (4,128,242) to have no lip where the muscle back surface intersection with the sole surface, and a substantial portion of the extra mass portion being positioned below the cavity in order to have a more rounded intersection where the rear surface and the sole surface intersect and as such have a head with less interaction with the ground when impacting the back of the sole with the ground when impacting a ball on the ground and still have a weighted sole section. As such there would be a muscle back portion having no visible cavity thereon. In view of the patent of Viollaz it would have been obvious to modify the head of Elkins (4,128,242) to have the cavity substantially filled with foamed polyurethane in order to provide vibration dampening to a head at impact and in order to utilize a shock absorption material placed inside heads used in the market place.

Motomiya discloses filling a sealed space with an elastic filler material such as foamed urethane and rubber (Col. 2, Lns. 14-16). In view of the patent of Motomiya it would have been obvious to modify the head of Elkins (4,128,242) to have a polyurethane being a high rebound foamed elastomer filling a cavity in order to utilize a

type of urethane shock absorption material used in the market place inserted in cavities of heads.

It would have been obvious to modify the head of Elkins (4,128,242) to have a muscle back surface having an upper ledge that generally follows the contour of the top edge and a muscle back portion covering at least half of the surface area of the rear surface in order to maximize lowering the center of gravity of the head and in order to have the generally same cross section of the head from face to back as shown from the toe view in figure 7 all the way to the heel to make the head generally symmetric so ball hits on the toe or heel side of the face have the same performance.

Response to Arguments

3. The argument that Behrendt is improper due to having a wide sole is disagreed with. If the sole of Behrendt is measured the same way as the Applicant measures the sole Behrendt is able to have a distance which is less at the sole than at the top edge. The argument that the Examiner agrees based on a figure 6 on page 6 of the response that Elkins does not have the claimed feature is disagreed with. This figure 6 is not any of the prior art used to reject the claim in the Office Action dated 2 April 2009. Actually it was the Elkins (D244,558) reference originally used to reject the claimed feature. In fact the Examiner still stands by that this figure 6 of Elkins (D244,558) does read on the feature being discussed. This was pointed out on page 14 of the Office Action dated 2 April 2009.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen L. Blau whose telephone number is (571) 272-4406. The examiner can normally be reached on Mon - Fri 10:00 AM - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eugene Kim can be reached on (571) 272-4463. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.